

### **In the Claims**

Please cancel claims 6-21 and 23-27 without prejudice.

Please amend the claims as follows:

1. (Three times amended) A cDNA sequence which encodes for murine protein 4-1BB comprising SEQ ID NO:2.
22. (Twice amended) A purified and isolated DNA which encodes the amino acid sequence SEQ ID NO:2 [shown in figures 2a and 2b, or a fragment of the DNA that specifically hybridizes to the DNA sequence in Figure 2], a fragment of the DNA which corresponds to nucleotide positions 661-855 or 1281-1557 of SEQ ID NO:1, or the complement thereof.

### **Remarks**

Reconsideration and withdrawal of the rejections of the claims in view of the amendments and remarks herein, is respectfully requested. Claims 1 and 22 are amended, and claims 6-21 and 23-27 are canceled. Claims 1-3, 22 and 28-30 are pending.

Claims 6-21 and 23-27 are canceled solely in response to the restriction requirement and without prejudice to their presentation in an appropriately-filed divisional application.

Amended claim 1 is supported by Figure 2 of the specification.

Amended claim 22 is supported by the specification at page 17, lines 26-31.

Claims 1 and 22 were rejected under 35 U.S.C. § 112, first paragraph. The amendments to claims 1 and 22 moot this rejection.

Claims 28-30 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

In particular, the Examiner asserts that the specification does not put forth which amino acids of the polypeptide sequence shown in Figure 2 constitute the extracellular domain or result in a soluble protein. However, the specification discloses that murine 4-1BB has a 22 amino acid signal peptide (see page 17, line 17), a 26 amino acid hydrophobic region (membrane anchor) at positions 182-211 followed by a 45 residue hydrophilic region (page 18, lines 12-14 and 23-26). Figure 2 provides the sequence of a 256 amino acid polypeptide, the first 22 residues of which are a signal

peptide. At page 31, lines 11-14, the specification describes the preparation of a vector which encodes 4-1BB which lacks the membrane anchor (residues 182-211) and the cytoplasmic domain (residues 212-256). The expression of that vector in COS cells is disclosed as yielding "soluble 4-1BB" (page 31, line 20). In view of this description, the art worker in possession of Applicant's specification would readily understand the metes and bounds of the phrases "extracellular domain of murine 4-1BB" and "soluble 4-1BB".

It is respectfully submitted that the pending claims are in conformance with 35 U.S.C. § 112. Therefore, withdrawal of the § 112 rejections of the claims is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-373-6959) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

BYOUNG S. KWON,

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938

Minneapolis, MN 55402

(612) 373-6959

Date

January 30, 2001

By

[Signature]

Janet E. Embretson

Reg. No. 39,665

**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box AF, Commissioner of Patents, Washington, D.C. 20231, on this 30th day of January, 2001.

Name

Dawn M. Poole

Signature

[Signature]